

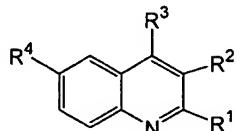
Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (Original) A quinoline derivative of formula 1, or pharmaceutically acceptable salt of the same:

formula 1



wherein,

R¹ is piperazinyl, 2-methylpiperazinyl, perhydrodiazepinyl or N-methyl-N-(2-N'-methylamino)ethylamine group;

R² is H, halogen atom, C₁~C₄ alkyl or C₁~C₄ haloalkyl;

R³ is H, halogen atom, vinyl or furanyl group; and

R⁴ is halogen atom or nitro group

with the proviso that

when R¹ is piperazinyl or 2-methylpiperazinyl;

R³ is H; and

R⁴ is nitro group,

R² is not H, halogen atom, C₁~C₃ alkyl, or C₁~C₂ haloalkyl.

2. (Original) The derivative of claim 1, wherein R¹ is 2-methylpiperazinyl, perhydrodiazepinyl or N-methyl-N-(2-N'-methylamino)ethylamine;

R² is H, bromine, methyl, ethyl, chloropropyl or fluoropropyl;

R³ is H, chlorine, bromine, iodine, vinyl or 2-furanyl group; and

R⁴ is chlorine, bromine, iodine, or nitro group

with the proviso that

when R¹ is 2-methylpiperazinyl;

R³ is H; and

R⁴ is nitro group,

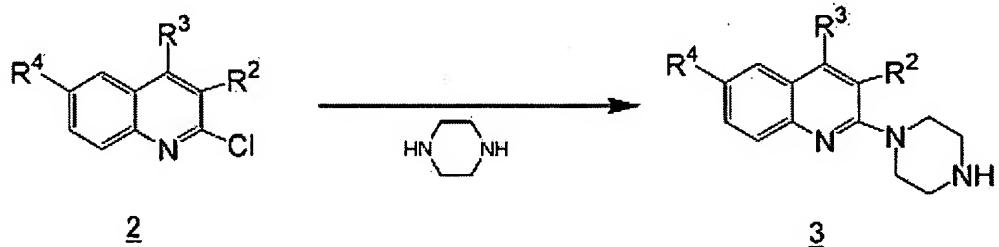
R² is not H, bromine, methyl or ethyl.

3. (Original) The derivative of claim 1, wherein the derivative is selected from the group consisting of:

3-(3-chloropropyl)-6-nitro-2-piperazin-1-yl-quinoline;
3-(3-fluoropropyl)-6-nitro-2-piperazin-1-yl-quinoline;
6-iodo-2-piperazin-1-yl-quinoline;
6-bromo-2-piperazin-1-yl-quinoline;
6-chloro-2-piperazin-1-yl-quinoline;
4-chloro-6-nitro-2-piperazin-1-yl-quinoline;
4-bromo-6-nitro-2-piperazin-1-yl-quinoline;
4-iodo-6-nitro-2-piperazin-1-yl-quinoline;
6-nitro-2-piperazin-1-yl-4-vinylquinoline;
4-(2-furanyl)-6-nitro-2-piperazin-1-yl-quinoline;
2-(N-methyl-N-(2-N'-methylamino)ethyl)amino-6-nitroquinoline; and
2-perhydrodiazepin-1-yl-6-nitroquinoline.

4. (Original) A method for preparing a compound of formula 3, which comprises substituting a quinoline compound of formula 2 with piperazine to introduce a piperazinyl group at 2-position of the quinoline compound of formula 2:

Reaction Scheme 1



wherein,

R² is H, halogen atom, C₁~C₄ alkyl or C₁~C₄ haloalkyl;

R³ is H, halogen atom, vinyl or furanyl group; and

R⁴ is halogen atom or nitro group.

5. (Original) A pharmaceutical composition comprising the quinoline derivative of the formula 1 as an effective ingredient for preventing or treating serotonin-related mental disorder.

6. (Original) The composition of claim 1, wherein the mental disorder is a depression.